

What is claimed:

1. A method of determining if a subject is at risk for prostate cancer recurrence, the method comprising:
 providing a sample from a subject; and
 determining PSMA expression levels in the sample ,
 wherein increased PSMA expression levels relative to a reference standard are indicative of a risk of prostate cancer recurrence, to thereby determine if the subject is at risk of prostate cancer recurrence.
2. The method of claim 1, wherein the subject is diagnosed with prostate cancer.
3. The method of claim 1, wherein the increased PSMA levels are increased relative to a reference standard.
4. The method of claim 1, wherein the reference standard is PSMA expression levels in a control subject diagnosed with prostate cancer.
5. The method of claim 1, wherein the sample is a fluid sample from the subject.
6. The method of claim 5, wherein the fluid is selected from the group consisting of serum, semen, and urine.
7. The method of claim 1, wherein the sample is a tissue sample from the subject.
8. The method of claim 7, wherein the tissue sample is a biopsy sample.
9. The method of claim 7, wherein the tissue sample is a sample from a prostatic or cancerous lesion.
10. The method of claim 7, wherein the tissue is obtained from a partial or radical prostatectomy of the subject.
11. The method of claim 1, wherein the risk of recurrence is determined upon diagnosis of prostate cancer.
12. The method of claim 1, wherein the risk of recurrence is determined after the subject is diagnosed with prostate cancer.
13. The method of claim 1, wherein the risk of recurrence is determined after the subject has been treated with an anti-cancer treatment.

14. The method of claim 13, wherein the anti-cancer treatment is a radical or partial prostatectomy.
15. The method of claim 1, wherein PSMA expression levels are determined by determining the PSMA protein levels in a sample.
16. The method of claim 15, wherein PSMA protein levels are determined by a method selected from the group consisting of an enzyme-linked immunosorbent assay (ELISA), a radioimmunoassay (RIA), a Western blot, or an immunohistochemical assay (IHC).
17. The method of claim 1, wherein PSMA expression levels are determined by determining the PSMA nucleic acid levels in a sample.
18. The method of claim 17, wherein PSMA nucleic acid levels are determined by a method selected from the group consisting of Northern blotting, RT-PCR, and biochip-based methods.
19. The method of claim 1, further comprising selecting a treatment for a subject at risk for recurrence.
20. The method of claim 19, wherein the treatment is selected from the group consisting of surgical treatment, radiation therapy, chemotherapy, antibody therapy, and hormonal therapy.
21. The method of claim 20, wherein the treatment is a surgical treatment selected from the group consisting of partial prostatectomy and radical prostatectomy.
22. The method of claim 20, wherein the treatment is radiation therapy.
23. The method of claim 22, wherein the radiation therapy is selected from the group consisting of external-beam therapy; interstitial radiation therapy; and a combination of external-beam therapy and interstitial radiation therapy.
24. The method of claim 20, wherein the treatment is antibody therapy.
25. The method of claim 24, wherein the antibody therapy comprises administration of a labeled or unlabeled antibody.
26. The method of claim 24, wherein the antibody therapy comprises administration of an anti PSMA antibody that binds the extracellular domain of PSMA.
27. The method of claim 20, wherein the treatment is hormonal therapy.
28. The method of claim 19, comprising selecting at least two treatments for the subject.

29. The method of claim 28, wherein the two treatments are
 - a. surgery, cryotherapy, or radiation, and
 - b. chemotherapy; antibody therapy or hormonal therapy.
30. The method of claim 28, wherein the subject has prostate cancer, and the treatments are:
 - a. a partial or radical prostatectomy, and
 - b. one or more of: chemotherapy, radiation therapy, hormone therapy, or antibody therapy.
31. The method of claim 30, wherein the treatments are:
 - a. a partial or radical prostatectomy, and
 - b. antibody therapy.
32. The method of claim 31, wherein the antibody therapy is administration of an antibody that binds the extracellular domain of PSMA.
33. The method of claim 1, wherein a subject that does not have a higher level of expression is assigned a value of 40% or less risk of recurrence.
34. The method of claim 1, wherein a subject that does not have a higher level of expression is assigned a value of 30% or less risk of recurrence.
35. The method of claim 1, further comprising selecting a treatment for the subject wherein the risk of recurrence is low.
36. The method of claim 35, wherein the treatment selected is one or more of: surgery, cryotherapy or radiation therapy.
37. The method of claim 35, wherein the risk of recurrence is less than 40%.
38. The method of claim 35, wherein the risk of recurrence is less than 30%.
39. The method of claim 36, wherein the surgery is a partial or radical prostatectomy.
40. The method of claim 1, comprising:
 - determining PSMA expression levels in a plurality of subjects, wherein increased PSMA expression levels are indicative of a risk of cancer recurrence; and
 - selecting a subset of the plurality of subjects having increased expression levels for administration of an anti-cancer treatment.